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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Rosanne D. Dunn

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EXAMINER

SCHWADRON, RONALD B

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1644

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,690	Applicant(s) DUNN ET AL.	
	Examiner Ron Schwadron, Ph.D.	Art Unit 1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 28-48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. The rejection of claims 28-48 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement for the reasons elaborated in the previous Office Action is withdrawn in view of the amended claims.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 28-38,43,44,47,48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uhr et al. (US Patent 4,792,447) in view of Raison et al. (WO 03/004056) and Abe et al. Applicants arguments have been considered and deemed not persuasive.

Uhr et al. teach antibody against lambda light chain wherein said antibody binds lambda light chain on tumor cells and wherein said antibody is conjugated to a toxin(see column 4, first paragraph and column 3, first paragraph and last paragraph). The antibody is labeled with a detectable moiety (aka a toxin). The conjugate is prepared in a diluent (for example see column 8, first complete paragraph). The conjugate is used to treat B cell tumors including B cell leukemia/lymphoma (see column 3, first paragraph and column 1, third paragraph). Uhr et al. disclose the method of claim 38 wherein the autologous bone marrow contains hematopoietic progenitor cells (see column 14, first paragraph). The method of Uhr et al. uses a chemotherapeutic agent (see column 15, second paragraph), wherein chemotherapeutic agents have the functional effect recited in claim 36 (see claim 37). Uhr et al. do not teach that said method can be used to treat multiple myeloma or that the antibody used binds free lambda light chain but does not bind intact Ig associated lambda chain. Raison et al. discloses that malignant B cells in multiple myeloma patients can produce light chains of kappa or lambda (see page 1, penultimate paragraph). The aforementioned are the two known alleles of Ig light chain. Raison et al. disclose that kappa light chain expressing myeloma cells are found which express free kappa light chain on the cell surface (see page 1, last paragraph) and that antibodies which bind said molecule can be used to treat such tumors (see page 2, second paragraph). In view of the fact that kappa and light chains are the two known alleles of Ig light chain, it would have been expected by a routineer that lambda light chain expressing myeloma cells would have been found which express free lambda light chain on the cell surface. Abe et al. disclose antibodies which bind free lambda light chain but does not bind intact Ig associated lambda chain (see Table 3).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have created the claimed invention because Uhr et al. teach antibody conjugate against lambda light chain wherein said antibody binds lambda light chain on tumor cells and wherein the conjugate is used to treat B cell tumors whilst

Raison et al. discloses that malignant B cells in multiple myeloma patients can produce light chains of kappa or lambda wherein the aforementioned molecules are the two known alleles of Ig light chain and that kappa light chain expressing myeloma cells are found which express free kappa light chain on the cell surface and that antibodies which bind said molecule can be used to treat such tumors whilst in view of the fact that kappa and light chains are the two known alleles of Ig light chain, it would have been

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expected by a routineer that lambda light chain expressing myeloma cells would have been found which express free lambda light chain on the cell surface and Abe et al. disclose antibodies which bind free lambda light chain but does not bind Ig associated lambda chain. One of ordinary skill in the art at the time the invention was made would have been motivated to the aforementioned because Uhr et al. teach antibody conjugate against lambda light chain wherein said antibody binds lambda light chain on tumor cells and wherein the conjugate is used to treat B cell tumors whilst in view of the teachings of Raison et al. , it would have been expected by a routineer that lambda light chain expressing myeloma cells would have been found which express free lambda light chain on the cell surface and Abe et al. disclose antibodies which bind free lambda light chain but does not bind Ig associated lambda chain. In KSR Int'l Co. v. Teleflex Inc., 550 U.S. m, 2007 WL 1237837, at "13 (2007) it was stated that **"if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill"**.

Regarding applicants comments and the Jennings 1.132 declaration, said declaration refers to a variety of publications published after the effective filing date of the instant application. However, the MPEP section 2143.02 (III) states:

III. PREDICTABILITY IS DETERMINED AT THE TIME THE INVENTION WAS MADE

Whether an art is predictable or whether the proposed modification or combination of the prior art has a reasonable expectation of success is determined *at the time the invention was made*. Ex parte Erlich, 3 USPQ2d 1011 (Bd. Pat. App. & Inter. 1986) (Although an earlier case reversed a rejection because of unpredictability in the field of monoclonal antibodies, the court found "in this case at the time this invention was made, one of ordinary skill in the art would have been motivated to produce monoclonal antibodies specific for human fibroblast interferon using the method of [the prior art] with a reasonable expectation of success." 3 USPQ2d at 1016 (emphasis in original).).

Thus, comments made regarding said publications are not germane to the issue of reasonable expectation of success/predictability and the instant rejection. Regarding applicants comments about paragraph 17 of the Jennings declaration, said passage

refers to one of the aforementioned publications filed after the effective filing date of the instant application. In addition, said comments ignore the fact that surface bound kappa light was already known in the art. Regarding the various cited differences between kappa and lambda light chain, both sets of light chain are structurally similar in the ability to form dimers with Ig heavy chain. Furthermore, in view of the ability of both types of light chains to associate with heavy chain it would be reasonable to conclude that kappa and lambda light chains would have a similar ability to associate with molecules other than Ig heavy chain.

5. Claims 39-42,45,46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uhr et al. (US Patent 4,792,447) in view of Raison et al. (WO 03/004056) and Abe et al. as applied to claims 28-38, 43,44,47,48 above, and further in view of Ruben et al. (US 2005/0255532).

The previous rejection renders obvious the claimed inventions except for the method of claims 39-42 or antibodies of claims 45,46. Ruben et al. teach therapeutic use of chimeric antibodies (see [0029] and [0218]). Ruben et al. teach in vivo diagnostic use of an antitumor antibody labeled with a radioisotope (see [0261] and [0362]). Ruben et al. teach that the antibody can be conjugated to heterologous polypeptides or nucleic acids encoding such molecules such as cytokines (see [0261],[0294],[0373],[0375],[0440],[0366]). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have created the claimed invention because the previous rejection renders obvious the claimed inventions except for the method of claims 39-42 or antibodies of claims 45,46 whilst Ruben et al. teach therapeutic use of chimeric antibodies, in vivo diagnostic use of an antitumor antibody labeled with a radioisotope and that the antibody can be conjugated to heterologous polypeptides or nucleic acids encoding such molecules such as cytokines. A routineer would have treated the autologous cell transplant recipient with the antilambda antibody to kill tumor cells present in the recipient. One of ordinary skill in the art at the time the invention was made would have been motivated to do the aforementioned because Ruben et al. teach therapeutic use of chimeric antibodies, in vivo diagnostic use of an antitumor antibody labeled with a radioisotope and that the antibody can be conjugated to heterologous polypeptides or nucleic acids encoding

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such molecules such as cytokines and a routineer would have treated the autologous cell transplant recipient with the antilambda antibody to kill tumor cells present in the recipient. In KSR Int'l Co. v. Teleflex Inc., 550 U.S. m, 2007 WL 1237837, at *13 (2007) it was stated that **"if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill"**.

Applicants arguments are as per addressed above.

6. No claims are allowed.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ron Schwadron, Ph.D. whose telephone number is (571)272-0851. The examiner can normally be reached on Monday-Thursday 7:30-6:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on 571 272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ron Schwadron/

Ron Schwadron, Ph.D.

Primary Examiner, Art Unit 1644